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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,168	04/16/2004	Richard J. Dalidowitz	011988-0308361	8273

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PILLSBURY WINTHROP, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER	
SHARP, JEFFREY ANDREW	
ART UNIT	**PAPER NUMBER**
3677	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/825,168	DALIDOWITZ ET AL.	
	Examiner	Art Unit	
	Jeffrey Sharp	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

[1] Claims 1-30 are pending.

Drawings

[2] . The drawings are objected to because:

Numerals, text, and arrows appear to be hand-written and unclear in spots.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

[3] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[4] Claims 1-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Kish et al. US-5,749,692 in view of Perkins US-3,861,527, Hyner et al. US-5,275,892, and Gabriel et al. US-5,476,687.

Kish et al. teaches a carbon steel fastener having a head, tip, and shank comprising both ribs and flutes for improved holding power. The fastener is zinc-plated, and comprises a second chromate coating which is further coated with a polymeric layer (thermoplastic or thermoset) as substantially disclosed by Applicant, in order to provide further corrosion resistance.

However, Kish et al. is silent as to the actual layer **thicknesses**, a **textured head surface**, and **welded frangible wires**.

Perkins teaches that it is customary to provide a **textured surface to the head of a fastener** to facilitate the non-slippage of a striking head when used in a tool. As is known in the art, the textured surface would obviously also double as an improved adhering surface for the polymeric coating, as textured surfaces provide more surface area contact and thus improve

adherence. This is especially important at the head, because a hammer or other striking surface would mar or chip the coating off of the head easier without the textured surface. Regardless of the aforementioned motivations for having a textured head surface, Perkins specifically discloses the textured head surface in combination with a collation of polymer-coated fasteners having a head, shank, tip, ribs, and *'surface deformations'* as substantially disclosed by Applicant. See Perkins, Figure 2 and Col 2 lines 42-45. See also, Schniedermeier US-4,932,820 Col 2 lines 14-20, and Col 5 lines 4-7

Hyner et al. teaches coating layers for any ferrous metal fastener. Hyner et al. expressly discloses a **zinc galvanic coating** electrodeposited on a metal fastener for corrosion resistance having a **thickness** of generally 0.1-3 mils, as low as 0.05 mils, and preferably under 0.2 mil (Col 4 lines 47-52 converted from inches). This satisfies the limitations of the instant claims 1 and 2, *'greater than about 0.1 mil'* and *'1.2-2.0 mils'* as being a range within a range disclosed by the prior art. Hyner et al. also express that it is customary to provide an additional, second coating over the zinc layer, said coating comprising chromate or the like. Lastly, Hyner et al. teach that coating thicknesses may be varied as an obvious matter of design choice, as it is stated: *'The thickness of the plating and/or coating layer is not limited and can be varied to obtain the desired level of protection' (Hyner et al. Col 4 lines 63-66).* Pertinent to claims 3 and 4, Hyner et al. specifically teach that flash layers over zinc layers are well known in the art, said flash layers generally comprising a thickness range of 0.01-0.05 mils (Col 5 lines 24-26).

Gabriel et al. teaches using **frangible wires** welded to the shanks of each fastener as an alternative means for collating the nails, as is well-known in the art (pertinent to claim 8). Other well-known means includes adhesive bonding and/or collating tape. It is advantageous to collate

nails in order to automate nail driving. Note that Gabriel et al. do not teach away from using the collating wires in combination with coated fasteners. The fasteners in combination with the welded wires have a sequential zinc, chromate, and polymeric coating for corrosion resistance, higher pull out force, and lower insertion force. The polymeric layer also suits to cover spots that are missed by the zinc and chromate undercoating. See Gabriel et al.Col 5 line 63-Col 6 line 16, and Col 6 lines 30-33. Note that the wires collate the fasteners in approximate parallel relationship, said wires being generally perpendicular to the shanks (pertinent to claim 7), although it is also known to incline the fasteners to improve packing density. Gabriel shows that collated coated fasteners can obviously have a 'substantially smooth' shank (pertinent to claim 9).

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the fastener taught by Kish et al., to 1) be advantageously collated with **welded frangible wires** as suggested by Gabriel et al., in order to facilitate rapid automation with a conventional nail gun. It would have further been obvious to 2) provide an upset or **textured surface** on to the head of a coated nail as suggested by Perkins et al., in order to improve the striking surface by eliminating slippage, and to (obviously and inherently) provide additional 'gripping' surfaces for better adhesion of the coating, thus preventing chipping upon impact. Lastly, it would have been obvious to one of ordinary skill in the art, to 3) provide the sequential anti-corrosive zinc, chromate, and polymeric layers taught by Kish et al., with the **thickness ranges** expressly disclosed by Hyner et al., as it is obvious to modify coating thicknesses to perform optimally for the application as a matter of design choice.

[5] Claims 13-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kish et al. US-5,749,692 in view of Lat et al. US-5,178,903, Perkins US-3,861,527, and Hyner et al. US-5,275,892.

Kish et al. teaches a carbon steel fastener having a head, tip, and shank comprising both ribs and flutes for improved holding power. The fastener is zinc-plated, and comprises a second chromate coating which is further coated with a polymeric layer (thermoplastic or thermoset) as substantially disclosed by Applicant, in order to provide further corrosion resistance.

However, Kish et al. is silent as to the actual layer **thicknesses**, a **textured head surface**, and use of the fastener in combination with **pressure-treated wood** (Kish only broadly mentions general wooden or plywood workpieces).

Lat et al. suggest that a coated fastener comprising an electroplated zinc coating and second coating of chromate and polymeric material is particularly **well-suited for pressure-treated wood**. Lat et al., for example, mentions pressure-treated wood containing, but not limited to, copper-chromium-arsenate (Col 3 lines 43-47). Applicant's admission of prior art on Page 3, lines 1-5 of paragraph 0009 discloses that due to environmental and other concerns, copper-chromium-arsenate has been replaced with ACQ and CBA (pertinent to claims 24-26). Thus, it would be appreciated by one of ordinary skill in the art, that pressure treated wood generally encompasses wood treated with CCA, ACQ, and CBA.

Perkins teaches that it is customary to provide a **textured surface to the head of a fastener** to facilitate the non-slippage of a striking head when used in a tool. As is known in the art, the textured surface would obviously also double as an improved adhering surface for the polymeric coating, as textured surfaces provide more surface area contact and thus improve

adherence. This is especially important at the head, because a hammer or other striking surface would mar or chip the coating off of the head easier without the textured surface. Regardless of the aforementioned motivations for having a textured head surface, Perkins specifically discloses the textured head surface in combination with a collation of polymer-coated fasteners having a head, shank, tip, ribs, and *'surface deformations'* as substantially disclosed by Applicant. See Perkins, Figure 2 and Col 2 lines 42-45. See also, Schniedermeier US-4,932,820 Col 2 lines 14-20, and Col 5 lines 4-7

Hyner et al. teaches coating layers for any ferrous metal fastener. Hyner et al. expressly discloses a **zinc galvanic coating** electrodeposited on a metal fastener for corrosion resistance having a **thickness** of generally 0.1-3 mils, as low as 0.05 mils, and preferably under 0.2 mil (Col 4 lines 47-52 converted from inches). This satisfies the limitations of the instant claims 13, 14, and 27, *'greater than about 0.1 mil'* and *'1.2-2.0 mils'* as being a range within a range disclosed by the prior art. Hyner et al. also express that it is customary to provide an additional, second coating over the zinc layer, said coating comprising chromate or the like. Lastly, Hyner et al. teach that coating thicknesses may be varied as an obvious matter of design choice, as it is stated: *'The thickness of the plating and/or coating layer is not limited and can be varied to obtain the desired level of protection' (Hyner et al. Col 4 lines 63-66).* Pertinent to claims 15, 16, and 28, Hyner et al. specifically teach that flash layers over zinc layers are well known in the art, said flash layers generally comprising a thickness range of 0.01-0.05 mils (Col 5 lines 24-26).

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the fastener taught by Kish et al., to 1) be advantageously used in combination with a

pressure-treated wood as suggested by Lat et al., due to the corrosive nature of the chemicals commonly impregnated into pressure-treated wood. It would have further been obvious to 2) provide an upset or **textured surface** on to the head of a coated nail as suggested by Perkins et al., in order to improve the striking surface by eliminating slippage, and to (obviously and inherently) provide additional 'gripping' surfaces for better adhesion of the coating, thus preventing chipping upon impact. Lastly, it would have been obvious to one of ordinary skill in the art, to 3) provide the sequential anti-corrosive zinc, chromate, and polymeric layers taught by Kish et al., with the **thickness ranges** expressly disclosed by Hyner et al., as it is obvious to modify coating thicknesses to perform optimally for the application as a matter of design choice.

As for claim 23, Applicant discloses an embodiment where the fastener is a screw. The Examiner takes official notice that collated screws are commonplace in the art. None of the aforecited references would suggest to anyone of ordinary skill in the art, that a screw could not be advantageously used with the same corrosion-resistant coatings, textured head surface, or in combination with pressure-treated wood (e.g., screws are used to fasten pressure-treated decking planks). See, for example, US-4,572,720 to Rockenfeller et al., which shows that a screw is essentially formed from a nail 'blank', and that a screw can be driven via 'hammer blow' into a substrate as would an ordinary nail. Essentially, a screw can be considered a nail with any helical upset disposed about the shank, thus Kish et al. '692 may be considered a 'screw'.

Conclusion

[6] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

US 1428247 A	USPAT	DOUGLAS MORRIS
US 4718802 A	USPAT	Rockenfeller; Gottfried et al.
US 4932820 A	USPAT	Schniedermeier; Henry W.
US 5375957 A	USPAT	Golledge; Brad F.
US 5642974 A	USPAT	Gabriel; William L. et al.
US 5749692 A	USPAT	Kish; Frederick A. et al.
US 6805525 B2	USPAT	Oswald; Robert C.
US 20020071741 A1	US-PGPUB	Oswald, Robert C.
US 20030145544 A1	US-PGPUB	Sutt, Edward G. JR.

[7] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Sharp whose telephone number is currently (703) 305-0426, but will change to (571) 272-7074 in April 2005 due to a move to the Alexandria, VA campus. The examiner can normally be reached on 7:30 am - 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS 1/18/05

ROBERT J. SANDY
PRIMARY EXAMINER